

REMARKS

The Office rejects claims 1-7 in the subject application. Claims 1-7 (3 independent claims; 7 total claims) remain pending in the application. Reconsideration of this application is respectfully requested.

Rejections under 35 U.S.C. §102

The Examiner rejects claim 1 under 35 U.S.C. §102(b) as being anticipated by EP0624004A1, (“Devlin”). The Examiner states that Devlin discloses “a surface mountable high power block up-converter having a mixer configured to receive an IF frequency signal and a local oscillator signal and outputs an RF frequency signal within a millimeter wave or higher band.” Applicants respectfully traverse the rejection.

Devlin discloses an integrated transceiver circuit that operates in the 2.4 GHz range. See Devlin, Col. 2, line 10. Furthermore, although Devlin does not disclose the wattage of the disclosed apparatus, it is generally known that for a 2.4 GHz frequency device of the type disclosed, the wattage would be less than 100 mW. Moreover, it is well known in the art that a 100 mW device at 2.4 GHz is not a high power block up-converter.

In contrast, claim 1 recites, “said RF frequency signal comprising a frequency in a millimeter-wave or higher band” (emphasis added). The millimeter-wave frequency is typically understood to be frequencies above 26-30 GHz. Clearly, Devlin does not disclose a block up-converter above 26 GHz. Rather, Devlin discloses RF frequencies an order of magnitude lower at 2.4 GHz.

Furthermore, claim 1 recites, “A ... high power block upconverter (HP-BUC) comprising: ... a high power amplification device....” (emphasis added). It is understood in the art that ‘high power’ is a relative term that depends, at least in part, on the frequency. For example, 1 Watt of power is generally understood to be “high power” for a block up-converter that operates at 30 GHz. Whereas, 1 Watt of power may be considered as ‘low power’ at 2.4 GHz. As best understood, the device described in Devlin is not a high power block up-converter.

Thus, Devlin does not disclose a block up-converter that is both a high power and high frequency (millimeter-wave or higher band) converter. Furthermore, Applicants point out that

this is not merely a matter of degree, and that the device of Devlin, as best understood could not operate at high power and in the millimeter-wave or higher frequency ranges recited in claim 1.

Thus, Applicants submit that each and every element of independent claim 1 is not disclosed, taught or suggested by Devlin. Accordingly claim 1 (and claims 2-5 which variously depend from claim 1) is not anticipated by Devlin and Applicants respectfully request the withdrawal of the rejection of claims 1-5.

Rejections under 35 U.S.C. §103

The Examiner also rejected claims 2-7 under 35 U.S.C. §103(a) as being unpatentable over Devlin. As per claims 2 and 6-7, the Examiner states that Devlin does not specifically disclose that the mixer is of sub-harmonic type. As per claims 3-4, the Examiner states that Devlin does not specifically disclose “an insert coupled to the high power amplification device.”¹ However, the Examiner finds both to be notoriously well known. Applicants respectfully traverse the rejections.

Claims 2-5 variously depend from claim 1 which recites high power/high frequency as discussed above. Furthermore, independent claim 6 recites, “A method for signal upconversion in a high power block upconverter”, “to generate a radio frequency (RF) signal within a millimeter-wave band”, and “amplifying said RF signal such that no further signal amplification is required to said RF frequency signal prior to transmission in said millimeter-wave band” (emphasis added). In addition independent claim 7 recites, “A method for assembling a high power block upconverter (HP-BUC)”, and “producing a radio frequency (RF) signal in the millimeter-wave or higher bands” (emphasis added).

Thus, because Devlin does not disclose, among other things, high power/high frequency as recited in the claims, Applicants submit that each and every element of independent claims 1, 6, and 7 is not disclosed, taught or suggested by Devlin. Accordingly claims 1, 6 and 7 (and claims 2-5 which variously depend from claim 1) are allowable and Applicants respectfully request the withdrawal of the rejection of claims 2-7 under 35 U.S.C. §103.

¹ Applicants note that claim 5 was not specifically addressed in the Office Action.

Conclusion

In view of the above remarks, Applicants respectfully submit that pending claims 1-7 properly set forth that which Applicants regard as their invention and are allowable over the cited prior art. Accordingly, Applicants respectfully request allowance of the pending claims. The Examiner is invited to telephone the undersigned at (602)382-6367 at the Examiner's convenience, if that would help further prosecution of the subject Application. Applicants authorize and respectfully request that any fees due be charged to Deposit Account No. 19-2814.

This statement does NOT authorize charge of the issue fee.

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Respectfully submitted,

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